Source of 115,000

CALIFORNIA DEPARTMENT OF FISH AND GAME
Anadromous Fisheries Branch

Derivation of California Department of Fish and Game
115,000 Adult Fall Chinook Spawner Escapement Goal

The 115,000 adult fall chinook spawner escapement goal adopted by the California Department of Fish and Game in November 1978 was developed as follows:

1. Estimates of the average numbers of chinook spawners occurring in the Klamath River system in the early-1960's were obtained from the California Fish and Wildlife Plan (1965). The numbers given in the Plan are shown in Column 1 of the accompanying table. These numbers include both adults and grilse of both spring and fall runs.
2. The estimated numbers of spring chinook included in each of the areas (Column 2) were subtracted from the totals given in the Plan to obtain figures for fall chinook (adults plus grilse) (Column 3). The values used in Column 2 to represent spring chinook in the Trinity River were taken from the Plan. Values for the remaining areas are based on information obtained from Department of Fish and Game personnel familiar with the areas.
3. Adult fractions of the fall run in each area were then calculated (Columns 4 and 5). Adult and grilse counts for fall chinook in the Shasta River for years 1970 through 1978 were used to obtain the percentage used for all areas except the Trinity River. Adult-grilse counts for fall chinook observed at Department of Fish and Game tagging weirs in the lower Trinity River (below Willow Creek) for years 1977-1978 were used to obtain the percentage for the Trinity River.

10/18/82

	COL. 1 Estimated numbers of chinook spawners (spring + fall) (adults + grilse) in early 1960's[1]	-	COL. 2 Estimated numbers of spring chinook in each area (adults + grilse)	=	COL. 3 Estimated numbers of fall chinook (adults + grilse)	x	COL. 4* Percent of fall run as adults	=	COL. 5 Estimated numbers of fall-run adults
Shasta	20,000	-	0[2]	=	20,000	x	72.0[5]	=	14,400
Scott	8,000	-	0[2]	=	8,000	x	72.0[5]	=	5,760
Salmon	10,000	-	1,000[2]	=	9,000	x	72.0[5]	=	6,480
Trinity	80,000	-	7,000[3]	=	73,000	x	71.7[6]	=	52,341[7]
	(80,000)	-	(10,000)[4]	=	(70,000)	x	(71.7)[6]	=	(50,190)[7]
Balance of Klamath system	50,000	-	0[2]	=	50,000	x	72.0[5]	=	36,000[8]
TOTALS	168,000	-	8,000	=	160,000				114,981 (Rounded to 115,000)
	(168,000)	-	(11,000)	=	(157,000)				(112,830) (Rounded to 113,000)

See footnotes on following page.

* Recent year data

Footnotes:

1/ Numbers from California Fish and Wildlife Plan (1965).

2/ Source: Elton Bailey, FMS, California Dept. Fish and Game, R-1, Telecom 11/7/78. It is estimated that 10% of the Salmon River chinook escapement was made up of spring-run fish; it is similarly estimated that springs made up ≤1% of the chinook escapement in the Shasta and Scott rivers; springs estimated ≤1% of chinook escapement in balance of Klamath River system (= areas outside Shasta, Scott, Salmon and Trinity drainages). Assumed here that no springs included in the values given for the Shasta, Scott, and balance of the Klamath system in the California Fish and Wildlife Plan.

3/ California Fish and Wildlife Plan states spring chinook run in South Fork Trinity numbered 7-10 thousand in 1963. Based on pre-Trinity Division, Central Valley Project, counts at Lewiston, the spring chinook run in the main Trinity was small, numbering less than 500 fish annually. Assumed here that the 80,000 figure includes 7,000 spring run.

4/ Same as 3/ except assumed the 80,000 figure includes 10,000 spring run.

5/ Based on Shasta Rack adult-grilse counts for years 1970-1978.

6/ Based on adult-grilse counts observed at DFG tagging weirs in lower Trinity River 1977-1978.

7/ Includes mitigation goal (9,000) at Trinity River Hatchery.

8/ Includes mitigation goal (8,500) at Iron Gate Hatchery.